VISIT TO Adani Wind Power Plant

Name of Place: Adani Wind Power Plant (Mundra)

Date: 9th October ,2025

Venue: Mundra, Kutch

No. of Students Participated: 107 (2nd and 3rd Year EC and ICT students)

Faculty Coordinators: Dr. Hitesh Shah

Mr. Rohit Parmar

Mr. Pradeep Shah

Mr. Jay Pandya

Mr. Ramesh Sargara

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1. Introduction

An industrial visit to the **Adani Wind Power Plant, Mundra**, was organized by Electronics and Communication department on **9th October 2025** for the students of **Electronics & Communication (EC)** and **Information & Communication Technology (ICT)** branches of G H Patel College of Engineering and Technology, Vallabh Vidyanagar.. The objective of the visit was to provide students with practical exposure to **wind energy generation**, modern power electronics, and automation used in renewable energy systems.

With increasing emphasis on clean and sustainable energy sources, wind power has become a vital component of India's renewable energy portfolio. This visit helped students understand the operational aspects of wind power plants and their integration with the electrical grid.

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2. Overview of the Wind Power Plant

The Adani Wind Power Plant at Mundra comprises multiple **wind turbine generators (WTGs)** installed across a large geographical area with favourable wind conditions. Each turbine consists of rotor blades, nacelle, gearbox, generator, and tower, all designed for efficient conversion of wind energy into electrical energy.

Engineers briefed students on turbine ratings, wind speed requirements, and site selection criteria, highlighting the importance of aerodynamics and mechanical design in wind energy systems.

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3. Wind Power Generation Process

During the visit, the working principle of wind turbines was explained, which includes:

- Conversion of kinetic energy of wind into mechanical energy using rotor blades
- Speed regulation through pitch and yaw control mechanisms
- Electrical power generation using generators within the nacelle
- Power conditioning using converters and inverters
- Transmission of generated power to the grid through step-up transformers

Students gained insights into how **variable wind conditions** affect power output and how control systems ensure stable operation.

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4. Automation, Control, and Communication Systems

Special emphasis was given to **automation and control technologies**, particularly relevant to EC and ICT students. The following aspects were discussed:

- SCADA-based monitoring and control of turbines
- Sensors for wind speed, direction, vibration, and temperature
- Remote fault detection and performance monitoring
- Communication networks linking turbines to centralized control rooms.

This section helped students relate concepts of **control systems, power electronics, and industrial communication** to real-world renewable energy applications.

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5. Safety and Environmental Aspects

The plant authorities highlighted strict **safety measures and environmental benefits** associated with wind power generation. Students were informed about:

- Electrical and mechanical safety procedures
- Emergency shutdown systems
- Minimal environmental impact compared to conventional power plants.
- Contribution of wind energy towards reduction of greenhouse gas emissions

The visit emphasized the role of wind energy in promoting sustainable development.

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6. Learning Outcomes and Conclusion

The industrial visit to the **Adani Wind Power Plant, Mundra**, provided students with valuable insights into **renewable energy technologies and modern power systems**. It enhanced their understanding of wind power generation, automation, and grid integration. The visit successfully connected theoretical concepts taught in classrooms with practical industrial implementations.

Such industrial visits play a significant role in broadening students' technical knowledge and encouraging them to pursue careers in renewable and sustainable energy sectors.

This Visit was organised in association of IEEE Student Chapter (GCET IEEE SB).

PHOTOGRAPHS:

GPS Map Camera
Mundra, Gujarat, India
Vm2p+wqh, Shantivan Colony, Mundra, Gujarat 370415, India
Lat 22.852372° Long 69.687153°
Friday, 10/10/2025 09:02 AM GMT +05:30
Google

GPS Map Camera
Mundra, Gujarat, India
Vm2p+wqh, Shantivan Colony, Mundra, Gujarat 370415, India
Lat 22.852373° Long 69.687157°
Friday, 10/10/2025 09:01 AM GMT +05:30
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Date: 09/10/2025

SIGNATURE LIST

Sr. No	ENROLLMENT NO.	NAME OF STUDENT	LEVEL	SIGNATURE OF STUDENT
1	12302060501002	Aman Rambabu Singh	3rd Year	
2	12302060501003	Anushka Heman Shah	3rd Year	
3	12302060501004	Bhavya DHARMESHKUMAR Patel	3rd Year	
4	12302060501005	Darsh Ashok Upadhyay	3rd Year	
5	12302060501009	Divya Jayeshkumar Patel	3rd Year	
6	12302060501010	Drashti Arvindbhai Savaliya	3rd Year	
7	12302060501012	Shingala Himesh Prabhudasbhai	3rd Year	
8	12302060501013	Huzefa Imran Parekh	3rd Year	
9	12302060501017	Mantra Janardan Rajyaguru	3rd Year	
10	12302060501018	Meet Kiran Parekh	3rd Year	
11	12302060501019	Niraj Ravindra Keste	3rd Year	
12	12302060501020	Nirja Amar Fijiwala	3rd Year	
13	12302060501022	Parshwa Pankeshkumar Patel	3rd Year	
14	12302060501024	Rudresh Mehul Dave	3rd Year	
15	12302060501027	Siddhi JatinKumar Suthar	3rd Year	
16	12302060501032	Vishaal K Sugumar	3rd Year	
17	12302060501033	Vishu Shaileshbhai Porwal	3rd Year	
18	12302060501034	Zeel Paresh Kumar Agrawal	3rd Year	
19	12302060501035	Kritikaba Rajkumarsinh Zala	3rd Year	
20	12302060501038	Aadhya Vijaykumar Dave	3rd Year	
21	12302060501040	Neel Viralbhai Patel	3rd Year	
22	12302060501042	Sneh Manojkumar Mistry	3rd Year	
23	12302060501043	Vedant Nilesh Bhatt	3rd Year	
24	12302060501044	Dalwadi Hirangi Umeshbhai	3rd Year	
25	12302060601001	Darshan Dheerajbhai Jadav	3rd Year	
26	12302060601002	Dhyey Pragneshbhai Patel	3rd Year	
27	12302060601003	Jaimin Ashokbhai Makwana	3rd Year	
28	12302060601004	Ujjawal Vachaspati Sharma	3rd Year	
29	12302060601005	Het Hiteshbhai Mehra	3rd Year	
30	12402050601004	Ananya thakar Samir thakar	2nd Year	
31	12402060501005	Patel Ansh Vishnubhai	2nd Year	

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32	12402060501006	Aryan Bhavesh Chokshi	2nd Year	A.B.Chokshi
33	12402060501007	Daksh Rajeshbhai Karia	2nd Year	
34	12402060501008	Dev Bhaveshkumar Patel	2nd Year	
35	12402060501009	Dev Bhavikbhai Patel	2nd Year	Dev
36	12402060501010	Dhruv Hiteshkumar Patel	2nd Year	
37	12402060501011	Dhruv Jigneshkumar Rana	2nd Year	
38	12402060501012	Dhruvi Hiteshkumar Bhatt	2nd Year	
39	12402060501013	Dhruvil Nimeshkumar Shah	2nd Year	DNS
40	12402060501014	Dhruvkumar Nileshkumar Patel	2nd Year	
41	12402060501015	Dhyan Priteshkumar Patel	2nd Year	
42	12402060501017	Hem Prafulchandra Patel	2nd Year	
43	12402060501018	Himani Sampatkumar Joshi	2nd Year	
44	12402060501019	Hirva Pravinbhai Narigara	2nd Year	
45	12402060501020	Honey Hemant Sakalshawala	2nd Year	Honey
46	12402060501025	Krina Jagdipsinh Mahida	2nd Year	
47	12402060501026	Krish Chimanbhai Vadukiya	2nd Year	
48	12402060501027	Krutil Niravkumar Patel	2nd Year	
49	12402060501029	Malay Jagdishbhai Kansagara	2nd Year	M.J.K
50	12402060501030	Misty Yogesh Patel	2nd Year	
51	12402060501032	MUSTANSIR MURTUJABHAI JADLIWALA	2nd Year	
52	12402060501033	Neel Dharmeshkumar Vyas	2nd Year	
53	12402060501034	Neel Jigarkumar Prajapati	2nd Year	
54	12402060501035	Neeti Hitendrabhai Shah	2nd Year	Neeti Shah
55	12402060501037	Piyush Kuldeep Sharma	2nd Year	
56	12402060501038	PRERAK SANDIPKUMAR KA.PATEL	2nd Year	
57	12402060501040	Priyadarshini Ashokbhai Jankat	2nd Year	
58	12402060501042	Pruthvikumar Sanjaybhai Jasani	2nd Year	P.K.J.
59	12402060501043	Raj Amitbhai Patel	2nd Year	
60	12402060501044	ROHAN CHANDRAKANTBHAI PATEL	2nd Year	
61	12402060501045	Rudra Dipakbhai Machhi	2nd Year	
62	12402060501046	Rutvi R Shah	2nd Year	
63	12402060501048	Shiv Pankajkumar Chauhan	2nd Year	
64	12402060501049	Shreya Neel Patel	2nd Year	

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65	12402060501050	Shreyansh Bipin Khuble	2nd Year	
66	12402060501051	Shruti Ajay Paldhikar	2nd Year	
67	12402060501052	Jeet Tushar Bhai Shukla	2nd Year	
68	12402060501055	Taksh Jaykumar Patel	2nd Year	
69	12402060501056	Taksha Hetal Patel	2nd Year	
70	12402060501057	PATEL Tirth ALPESHKUMAR	2nd Year	
71	12402060501058	PARMAR UTSAVRAJ NARESHKUMAR	2nd Year	
72	12402060501059	Ved Kalpeshkumar Contractor	2nd Year	
73	12402060501060	Ved Pareshkumar Prajapati	2nd Year	
74	12402060501061	VEDANSH DARSHANKUMAR SUTHAR	2nd Year	
75	12402060501062	Vedantkumar Pankajbhai Prajapati	2nd Year	
76	12402060501063	Vedika Haresh Kanani	2nd Year	
77	12402060501064	Venisha Raiyani Dilipbhai	2nd Year	
78	12402060501067	Viva Nirav Shah	2nd Year	
79	12402060501068	Vrajesh Pareshkumar Rana	2nd Year	
80	12402060501069	Yakuta Hozefa Bhatia	2nd Year	
81	12402060501070	Yash Hiteshkumar Panchal	2nd Year	
82	12402060501071	Bhavya Mineshkumar Brahmbhatt	2nd Year	
83	12402060501072	Dhruv Tushar Kumar Doshi	2nd Year	
84	12402060501077	samrat Jasvant Kiri	2nd Year	
85	12402060501078	Ved Kalpeshkumar Divawala	2nd Year	
86	12402060501079	Vidhi Jethva Jigneshbhai	2nd Year	
87	12402060503001	Kishan Narendra Patel	3rd Year	
88	12402060503003	Priyanshu S. Shah	3rd Year	
89	12402060603001	Gor Bhumika Harikrishna	3rd Year	
90	12402230501003	Aniyaliya Akshay Arvindbhai	2nd Year	
91	12402230501009	Dhrumi NileshBhai Vankar	2nd Year	
92	12402230501010	Hemany Vilasbhai Chaudhuri	2nd Year	
93	12402230501011	Ishan Prakashkumar Patel	2nd Year	
94	12402230501017	Krish Pravinkumar Deria	2nd Year	
95	12402230501021	NISARG GANPATBHAI PATEL	2nd Year	
96	12402230501026	CHAUHAN RUDRA SHANIKUMAR	2nd Year	
97	12402230501029	Umang Nandubhai Pawar	2nd Year	

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98	12402230501030	Vatsal bharatbhai Khanpara	2nd Year	
99	12403020605030	MAHEK VIRENDRASINH PUVAR	3rd Year	
100	25ECD001	Jinil Bhargavkumar Jani	2nd Year	
101	25ECD401	Het Manojkumar Parekh	2nd Year	
102	25ECD402	Preya Ashwinkumar Patel	2nd Year	
103	25ECD403	Priyanshi Nileshbhai Patel	2nd Year	
104	25ICTD001	Shubham Rashmin Pandya	2nd Year	
105	25ICTD003	Hansaliya Shyam Jitendrabhai	2nd Year	
106	25ICTD401	Sara Sanjeev Varghese	2nd Year	
107	25ICTD402	Ved NimeshBhai Vaidhya	2nd Year	
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